

ABSTRACT OF THE DISCLOSURE

A medical diagnostic device for measuring an analyte concentration or property of a biological fluid includes capillary flow channels to convey a sample of the fluid from an inlet to a branching point, and then to a measurement area and, alternatively, through a bypass channel to an overflow region. A first stop junction stops fluid flow after it enters the measurement area. The bypass channel has a capillary dimension in at least one direction. A second stop junction, in the bypass channel, has a boundary region that has a dimension that is greater in that direction and forms an angle that points toward the branching point. With this construction, the second stop junction initially prevents flow to the overflow region, but permits the flow after the measurement area is filled. The device is particularly suited for measuring coagulation time of blood.